spinning, at a circumferential velocity ratio between the front and rear rollers (circumferential velocity of a rear roller / circumferential velocity of a front roller) of 0.5 to 1.2 under heating conditions which satisfy $4 \leqq y \leqq -1.5x + 330$ and $(Tgc - 5)°C \leqq x \leqq (Tgc + 110)°C$ wherein Tgc represents a glass transition temperature of a core, x represents an annealing temperature (°C), and y: an annealing time (seconds).

21. (Amended) A production method of a plastic optical fiber, comprising the step of annealing a plastic optical fiber obtained by heat-drawing an undrawn fiber obtained by melt spinning, at a circumferential velocity ratio between (circumferential velocity of a rear roller / circumferential velocity of a front roller) between the front and rear rollers of 0.5 to 1.2 under heat conditions which satisfy $4 \leqq y \leqq -1.5x + 330$ and $(Tgc - 5)°C \leqq x \leqq (Tgc + 110)°C$, wherein Tgc represents a glass transition temperature of a core, x represents an annealing temperature (°C), and y represents an annealing time (seconds), while a tension of 0.35×10^6 to 1.5×10^6 Pa is applied to the fiber.

See the Appendix for amendments.